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REMARKS

Upon receipt of this response, the Examiner is respectfully requested to contact the undersigned representative of the Applicant to arrange a telephone interview concerning the inventive merits of this application.

Claims 30 and 31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly amended, by the above claim amendments, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections. The entered claim amendments are directed solely at overcoming the raised indefiniteness rejection(s) and are not directed at distinguishing the present invention from the art of record in this case.

Next, claims 15-16, 18, 23 and 30-31 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Bjorklund `341. The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the above amendments and the following remarks.

Bjorklund `341 relates to a dental drill having a stem with a substantially *rigid* shank whereas the presently claimed invention relates to and claims an instrument for specifically drilling root canals, i.e., specifically a *flexible* drilling instrument. As the dental drill according to Bjorklund `341 is substantially rigid, it is respectfully submitted that it would not be practical to use the same for drilling root canals because root canals are usually curved and the dental instrument must follow the curved shape of the root canal when drilling the dental material located around such curved canal. As a result of this, the technical problems to be solved by the prior art dental instrument according to Bjorklund `341 and the dental instrument according to the presently claimed invention are directed at solving completely different problems from one another.

More specifically, the prior art drill according to Bjorklund `341 is made from a substantially rigid support comprising a stem 1, a shank 2 and a projection 3 which supports hard metal elements 6 with cutting edges 7, and the hard metal elements are fixed to the projection 3 by brazing. The dental instrument according to Bjorklund `341 is suitable for drilling straight rectilinear holes but, as a result of its design, it is respectfully submitted that this dental instrument is *not* flexible and thus cannot follow a curved root canal because of its rigid design. Moreover, it is respectfully submitted that the prior art drill according to Bjorklund `341 is *not* designed to break at a junction region, located between the proximal region and the end section, *in the event that a predetermined drive torque is applied to the envelope 20 during use*

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of the dental instrument, as presently claimed. In direct distinction, the presently claimed dental instrument is designed to break at or adjacent the junction region in the event that a predetermined drive torque is applied to the envelope 20 during use.

The Examiner alleges that the dental instrument of Bjorklund `341 comprises a "central region that is capable of guiding the instrument through the root canal". It is respectfully submitted that this statement is unsupported by Bjorklund `341 because *this instrument is not sufficiently flexible but, as noted above, is rigid* having fixedly mounted hard metal elements attached to a central steel projection by brazing.

The Examiner further alleges that "the dental instrument further comprises a junction region located between the proximal region and the end section and the junction region comprises an area of the envelope which is "capable" of breaking in the event that a determined drive torque is applied". It is to be appreciated, as noted above, that the presently claimed invention is directed at a dental instrument which is designed to break at or adjacent the junction region in the event that a predetermined drive torque is applied to the envelope 20 during use, not merely an instrument which is "capable" of breaking.

Furthermore, although the dental drill of Bjorklund `341 may arguably include a section having the shape of an inverted cone, a cylindrical end section and a junction therebetween, it is noted that the axial length of the transition--from the end section to the junction, i.e., the axially length of the shank 2--is much longer than the axial length of the inverted cone section--i.e., the axial length of the projection 3 and the hard metal elements 6 with the cutting edges 7. This is in direct contradiction to the presently claimed dental instrument which recites the limitation that "the axial length of the envelope (20) is longer than an axial length of the transition." Such feature is clearly not taught, suggested, disclosed or remotely hinted at in Bjorklund `341.

In view of the forgoing amendments and remarks, it is respectfully submitted that the raised rejection, under 35 U.S.C. § 103(a), in view of Bjorklund `341 should be withdrawn at this time.

Claims 17, 24-26 and 29 are then rejected, under 35 U.S.C. § 103(a), as being unpatentable over Bjorklund `341, as applied to claim 15, in view of Johnson `209; claims 20-22 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Bjorklund `341 in view of Corneo `640; and claims 26 and 28 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Bjorklund `341 in view of Berlin `202. The Applicant acknowledges and

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respectfully traverses all of the raised obviousness rejections in view of the above amendments and the following remarks.

The Applicant acknowledges that the additional references of Johnson `209, Corneo `640 and/or Berlin `202 may arguably relate to the feature(s) indicated by the Examiner in the official action. Nevertheless, the Applicant respectfully submits that the combination of the base reference of Bjorklund `341 with this additional art of Johnson `209, Corneo `640 and/or Berlin `202 still fails to in any way teach, suggest or disclose the above distinguishing features of the presently claimed invention. That is, no combination of the art of record in this application teaches, suggests, discloses or remotely hints at the flexible drilling tool as presently claimed. As such, all of the raised rejections should be withdrawn at this time in view of the above amendments and remarks.

Corneo `640 relates to an instrument for filling dental root canals. This instrument comprises a distal part 5b separated from the proximal 5a part by a breaking zone 6. The distal part is made of filling material that *remains* in the root canal after the breaking zone 6 has been broken with *an instrument* like pincers or the same.

It is respectfully submitted that the breaking zone of the instrument according to the presently claimed invention is completely different. In paragraphs [006] and [007] of the pending specification, the breakage of an instrument during drilling a root canal is an event that a dentist dreads because the broken point is usually irretrievable. The presently claimed invention results in a solution which avoids this undesirable jamming/blocking phenomenon.

In order to emphasize the above noted distinctions between the presently claimed invention and the applied art, independent claim 15 now recites the features of a "flexible dental instrument for use in drilling a root canal....the dental instrument (10) being flexible....the envelope defining an axial length and....an area of the envelope (20) has a minimum thickness which is designed to break in the event that a predetermined drive torque is applied to the envelope (20) during use of the dental instrument, and a transition couples the junction region (17) to the end section (11) and the axial length of the envelope (20) is longer than an axial length of the transition." Independent claim 29 and 30 recite similar limitations. Such features are believed to clearly and patentably distinguish the presently claimed invention from all of the art of record, including the applied art.

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If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejection(s) should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Bjorklund '341, Johnson '209, Corneo '640 and/or Berlin '202 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,


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